STATE OF CALIFORNIA
DEPARTMENT OF HEALTH SERVICES
DIVISION OF DRINKING WATER AND ENVIRONMENTAL MANAGEMENT

APPROVED BACKFLOW PREVENTION ASSEMBLIES FOR SERVICE ISOLATION

2002 EDITION

INTRODUCTION

This is the 2002 Edition of the Department of Health Services' listing of approved backflow prevention assemblies for service isolation in California. The installation of an assembly that is not included in this list is a violation of Title 17, Code of California Regulations, Section 7601. The continued use of unapproved assemblies in existing installations is allowable until the assembly fails and cannot be repaired. Failed assemblies must be replaced with an approved assembly or repaired with approved spare parts.

The type of protection required to prevent backflow into the public water supply must be commensurate with the degree of hazard that exists on the water user's premises. This approved backflow prevention assemblies list includes four kinds of backflow protection assemblies: Double Check Valve (DC), Reduced Pressure Principle (RP), Double Check Detector, and Reduced Pressure Detector Assemblies. This list also includes information regarding Air-gap Separation type backflow prevention information.

This list supersedes the Department's 2000 approved backflow prevention assemblies' list and shall remain in effect until the Department publishes an updated edition of the list.

For additional information and questions regarding this list, please contact the Department of Health Services at (916) 323 - 6111.

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C. REDUCED PRESSURE PRINCIPLE ASSEMBLIES

A. AIR-GAP SEPARATION

DEFINITION:

An Air-gap (AG) Separation is a physical break between the supply line and a receiving vessel. (*California Code of Regulations (CCR), Title 17, Section 7583(c)*).

CONSTRUCTION AND INSTALLATION SPECIFICATIONS:

An Air-Gap separation shall be at least double the diameter of the supply pipe, measured vertically from the flood rim of the receiving vessel to the supply pipe; however, in no case the separation shall be less than one inch. (*CCR, Title 17, Section 7602(a)*).

An Air-Gap separation shall be located as close as practical to the user's connection and all piping between the user's connection and the receiving tank shall be entirely visible unless otherwise approved in writing by the water supplier and the health agency. (*CCR, Title 17, Section 7503(a)*).

An Air-Gap separation is the minimum type of backflow protection required to protect the public water supply at the water user connection for the following situations.

- The public water system is used to supplement a recycled water supply on the water user premises.

- The public water system serves water users premises where there is wastewater pumping and/or treatment and there is no interconnection between public water supplies and the wastewater pumping and/or treatment facilities. This does not include a single-family residence that has a sewage lift pump.

- The public water system serves water users premises where recycled water is used and there is no interconnection between the water system and the recycled water system.

- The public water system serves water users premises where hazardous substances are handled in any manner in which the substances may enter the onsite potable water system.

- The public water system serves water users premises where there is an unapproved auxiliary water supply which is interconnected with the public water system.

- The public water system serves water users premises where the fire system is supplied from the public water system and is interconnected with an unapproved auxiliary water supply.

B. DOUBLE CHECK VALVE ASSEMBLIES

DEFINITION:

A Double Check Valve Assembly (DC) is an assembly of at least two independently acting check valves including tightly closing shut-off valves on each side of the check valve assembly and test cocks available for testing the watertightness of each check valve. (*CCR, Title 17, Section 7583(f)*).

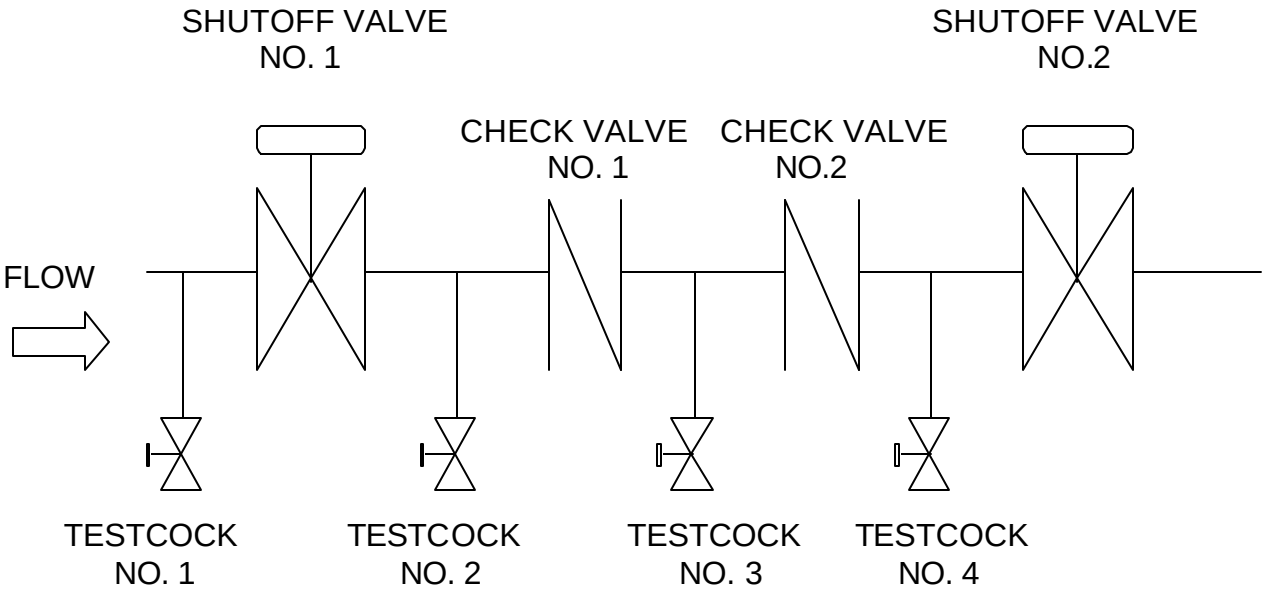
CONSTRUCTION AND INSTALLATION SPECIFICATIONS:

A required Double Check Vale Assembly, as a minimum, must conform to the AWWA Standard C506-78 (R83) adopted on January 28, 1978 for Double Check Valve Type Backflow Preventive Devices. (*CCR, Title 17, Section 7602 (b)*).

A Double Check Valve Assembly shall be located as close as practical to the user's connection and shall be installed above grade, if possible, and in a manner where it is readily accessible for testing and maintenance. (*CCR, Title 17, Section 7603 (b)*). Figure No. 1 shows a Double Check schematic.

FIGURE NO. 1

DOUBLE CHECK VALVE ASSEMBLY



A Double Check is the minimum type of backflow protection required to protect the public water supply at the water user connection for the following situations.

- The public water system serves water user premises where the fire protection system is directly supplied from the public water system and there is an unapproved auxiliary water supply on the premises or accessible to the premises that is not connected to the public water system.

- The public water system serves water user premises where the fire protection system is supplied from the public water system and where either elevated storage tanks or fire pumps that take suction from private reservoirs or tanks are on the users premises.

1. DOUBLE CHECK VALVE ASSEMBLIES

COMPANY	MODEL	SIZE (INCHES)											
		1/2	3/4	1	1-¼	1-½	2	2-½	3	4	6	8	10
AMES	DC									y	y	y	
	2000B	Av	Av	Av	Av	Av	Av						
	2000BM3		Av										
	2000 CIV									Av	Av	Av	Av
	2000-DC												A
	2000-G-DC												A
	2000-DCA									A	A	A	
	2000-G-DCA									A	A	A	
	2000 SE							A			A	A	
	2000 SS		y	y	y	y	y	A	A	A	A	A	A
	2000 SS-M									A	A		
BUCKNER	24100		y										
	24101			y									
	24102				y								
	24103					y							
	24104						y						
	24100/25		y										
	24101/25			y									
	24102/25				y								
	24103/25					y							
	24104/25						y						
CLA-VAL	D2		A	A	A	A							
	D4						A	A	A	A	A	A	A
	DC6LB		Av										
	DC6LW		A	A		A	A						
	DC7LW							A	A	A	A	A	A
	DC7LY							A	A	A	A	A	A
	DC8LW									Av	Av	A	
	DC8LY									Av	Av	A	
	DC8NW							y	y	y	y	y	y
	DC8NY							y	y	y	y	y	y
	DC8VW							Az	Az	Az	Az	Az	Az
	DC8VY							Az	Az	Az	Az	Az	Az
CONBRACO	1/2DC	Av											
	2 1/2DC							Av					

A signifies that these models are approved backflow prevention assembly for horizontal installations only.
Av signifies that these models are approved for both, horizontal and vertical up installations.
Az signifies that these models are approved only for N and Z configurations, as shown in the Appendix.
vA signifies that these models are approved only for vertical up inlet /vertical down outlet configurations.
y signifies that these models are no longer manufactured, only spare parts are available.

DOUBLE CHECK VALVE ASSEMBLIES

COMPANY	MODEL	SIZE (INCHES)											
		1/2	3/4	1	1-¼	1-½	2	2-½	3	4	6	8	10
CONBRACO	2 1/2DCU							vA					
	3DC								Av				
	3DCU								vA				
	4DC									Av			
	4DCU									vA			
	6DC										Av		
	6DCU										vA		
	40-100-02								A				
	40-100-03								A				
	40-100-05								A				
	40-103-02	A											
	40-104-02		A										
	40-104-99T		A										
	40-104-A2		A										
	40-104-A2T		A										
	40-104-TC2		A										
	40-105-02			A									
	40-105-99T			A									
	40-105-A2			A									
	40-105-A2T			A									
	40-105-TC2			A									
	40-106-02				A								
	40-106-A2				A								
	40-106-A2T				A								
	40-106-99T				A								
	40-107-02					A							
	40-107-A2					A							
	40-107-A2T					A							
	40-107-99T					A							
	40-108-02						A						
	40-108-A2						A						
	40-108-A2T						A						
	40-108-99T						A						
	40-109-02							A					
	40-109-03							A					
	40-109-05							A					
	40-10A-02									A			
	40-10A-03									A			
	40-10A-05									A			
	40-10A-06									A			

A signifies that these models are approved backflow prevention assembly for horizontal installations only.
Av signifies that these models are approved for both, horizontal and vertical up installations.
vA signifies that these models are approved only for vertical up inlet /vertical down outlet configurations.

DOUBLE CHECK VALVE ASSEMBLIES

COMPANY	MODEL	SIZE (INCHES)											
		1/2	3/4	1	1-¼	1-½	2	2-½	3	4	6	8	10
CONBRACO	40-10C-02										A		
	40-10C-03										A		
	40-10C-05										A		
	40-10C-06										A		
	40-10E-02											A	
	40-10E-03											A	
	40-10E-06											A	
	40-10G-02												A
	40-10G-03												A
	40-10G-06												A
FEBCO	805		y	y		y	y		y	y			
	805Y		A	A		A	A	y	y	y			y
	805YB		Av										
	805YR		A	A									
	805YD							A	A	A	A	A	A
	850	vAv	vAv	vAv	vAv	vAv	vAv	Av	Av	Av	Av	Av	
	850U	vAv	vAv	vAv	vAv	vAv	vAv						
	870							A	A	A	A	A	A
	870V							Az	Az	Az	Az	Az	Az
FLOMATIC	DCV		A	A		A	A	A	A	A			
	DCVE		A	A		A	A						
HERSEY/ GRINNELL	2								A	A	A	A	A
	FDC		A	A		A	A						
WATTS	007							Av	Av				
	007QT	Av	y	y		y	y						
	007PCQT	A				y	y						
	007M1QT		y	Av		y	Av						
	007M1PCQT		A	A		y	A						
	007M2QT		Av		Av	Av							
	007M2PCQT				Av	A							
	007M3QT		Av										
	007SSQT		y	y		y	y						
	007SSPCQT					y	y						
	007SSM1QT		y	y									
	007SSM1PCQT		y	y									
	700							y	y				
	709 QT		y	y		y	y						

A signifies that these models are approved backflow prevention assembly for horizontal installations only.
Av signifies that these models are approved for both, horizontal and vertical up installations.
Az signifies that these models are approved only for N and Z configurations, as shown in the Appendix.
vA signifies that these models are approved only for vertical up inlet /vertical down outlet configurations.
vAv signifies that these models are approved only for vertical up inlet /vertical up outlet configurations.
y signifies that these models are no longer manufactured, only spare parts are available.

DOUBLE CHECK VALVE ASSEMBLIES

COMPANY	MODEL	SIZE (INCHES)											
		1/2	3/4	1	1-¼	1-½	2	2-½	3	4	6	8	10
WATTS	709 BB							A	A				
	709							A	A	Av	Av	Av	Av
	709QT-FDA							A	A	A	A	A	A
	770									y		y	
	770 QT-FDA									y		y	
	772									y			y
	774		y	y	y	y	y	A	A	A	A	A	A
	774X							A			A	A	
	775QT	Av	Av	Av	Av	Av							
	SS007M1QT			Av									
	SS007M3QT	Av	Av										
	U007QT	Av	y	y		y	y						
	U007PCQT		y	y		y	y						
	U007M1AQT[1]		A				A						
	U007M1APCQT[1]		A				A						
	U007M1PCQT		A	A		A	A						
	U007M1QT		A	A		y	A						
	U007M2AQT[1] [1]					A							
	U007M2QT				A	A							
	U007SSQT		y	y		y	y						
	U007SSPCQT		y	y		y	y						
WILKINS	350							A	A	Av	Av		
	350G									Av	Av		
	350GPI									Av	Av		
	350PI									Av	Av		
	450									vA	vA		
	450G									vA	vA		
	550		y	y	y	y	y	y	y	y	y	A	
	550A		y	y									
	950		A	A	A	A	A	A	A	A	A	A	A
	950G									Av	Av		
	950XL		Av	A	A	A	A						
	950XLD		Av										
	950XLT		A	A	A	A	A						
	950XLU		A	A		A	A						

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Av signifies that these models are approved for both, horizontal and vertical up installations.
vA signifies that these models are approved only for vertical up inlet/vertical down outlet configurations.
y signifies that these models are no longer manufactured, only spare parts are available.

[1] The models U007M1AQT, U007M1APCQT, and U007M2AQT are only approved in the configurations shown in the appendix.

DEPARTMENT OF HEALTH SERVICES
APPROVED BACKFLOW PREVENTION ASSEMBLIES

DOUBLE CHECK VALVE ASSEMBLIES													
COMPANY	MODEL	SIZE (INCHES)											
		1/2	3/4	1	1-¼	1-½	2	2-½	3	4	6	8	10
	950A		A	A	A	A	A						
	550-M8	y (4 x 4 x 8)											
	550-M10	y (6 x 6 x 10)											

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Av signifies that these models are approved for both, horizontal and vertical up installations.
vA signifies that these models are approved only for vertical up inlet/vertical down outlet configurations.
y signifies that these models are no longer manufactured, only spare parts are available.

2. DOUBLE CHECK DETECTOR ASSEMBLIES[2]

COMPANY	MODEL	SIZE (INCHES)											
		1/2	3/4	1	1-¼	1- ½	2	2- ½	3	4	6	8	10
AMES	DCDC									y	y	y	
	3000B						Av						
	3000 ClV									Av	Av	Av	Av
	3000-DCDC												A
	3000-G-DCDC												y
	3000-DCDA									y	y	y	
	3000-G-DCDA									y	y	y	
	3000SE							A			A	A	
	3000SE-A											y	
	3000SS							A	A	A	A	A	A
	3000SS-A										y		
	3000SS-M									y	A		
	3000SS-WM1							A	A	A			
	3000SE-WM1										A		
CLA - VAL	DD7LY								A	A	A	A	A
	DD8LY									Av	Av	A	
	DD8NY							y	y	y	y	y	y
	DD8VY							Az	Az	Az	Az	Az	Az
CONBRACO	2 1/2DCDA							Av					
	2 1/2DCDA-6							Av					
	2 1/2DCDAU							vA					
	3DCDA								Av				
	3DCDA-6								Av				
	3DCDAU								vA				
	4DCDA									Av			
	4DCDA-6									Av			
	4DCDAU									vA			
	6DCDA										Av		
	6DCDA-6										Av		
	6DCDAU										vA		
	40-600-C3								A				
	40-600-E3								A				
	40-60A-C3									A			

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Av signifies that these models are approved for both, horizontal and vertical up installations.
vA signifies that these models are approved only for vertical up inlet/vertical down outlet configurations.
Az signifies that these models are approved only for N and Z configurations, as shown in the Appendix.
y signifies that these models are no longer manufactured, only spare parts are available.

[2] A DC detector assembly is an approved backflow prevention assembly that is configured the same as the DC assembly, except a DC detector is equipped with a bypass-detector that allows the visual inspection of flow through the assemblies.

DOUBLE CHECK DETECTOR ASSEMBLIES													
COMPANY	**MODEL**	**SIZE (INCHES)**											
		1/2	**3/4**	**1**	**1-¼**	**1- ½**	**2**	**2- ½**	**3**	**4**	**6**	**8**	**10**
CONBRACO	40-60A-C6									**A**			
	40-60A-E3									**A**			
	40-60A-E6									**A**			
	40-60C-C3										**A**		
	40-60C-C6										**A**		
	40-60C-E3										**A**		
	40-60C-E6										**A**		
	40-60E-C3											**A**	
	40-60E-C6											**A**	
	40-60E-E3											**A**	
	40-60E-E6											**A**	
	40-60G-C3												**A**
	40-60G-C6												**A**
	40-60G-E3												**A**
	40-60G-E6												**A**
FEBCO	806									**y**	**y**	**y**	**y**
	806YD								**A**	**A**	**A**	**A**	**A**
	856							**Av**	**Av**	**Av**	**Av**	**Av**	
	876							**A**	**A**	**A**	**A**	**A**	**A**
	876V							**Az**	**Az**	**Az**	**Az**	**Az**	**Az**
HERSEY / GRINNELL	DDC-II								**A**	**A**	**A**	**A**	**A**
WATTS	007 DCDA						**Av**	**Av**	**A**	**y**	**y**		
	709 DCDA								**A**	**Av**	**Av**	**Av**	**Av**
	770 DCDA									**y**		**y**	
	772 DCDA									**y**			**y**
	774 DCDA							**A**	**A**	**A**	**A**	**A**	**A**
	774 XDCDA							**A**			**A**	**A**	
WILKINS	350DA									**Av**	**Av**		
	350 DAG									**Av**	**Av**		
	350 DAGPI									**Av**	**Av**		
	350 DAPI									**Av**	**Av**		
	450DA									**vA**	**vA**		
	450DAG									**vA**	**vA**		
	950DA							**Av**	**Av**	**Av**	**Av**	**Av**	**A**
	950DAG									**Av**	**Av**		
	DCDA							**y**	**y**	**y**	**y**		

A signifies that these models are approved backflow prevention assembly for horizontal installations only.
Av signifies that these models are approved for both, horizontal and vertical up installations.
vA signifies that these models are approved only for vertical up inlet/vertical down outlet configurations.
Az signifies that these models are approved only for N and Z configurations, as shown in the Appendix.
y signifies that these models are no longer manufactured, only spare parts are available.

C. REDUCED PRESSURE PRINCIPLE ASSEMBLIES

DEFINITION:

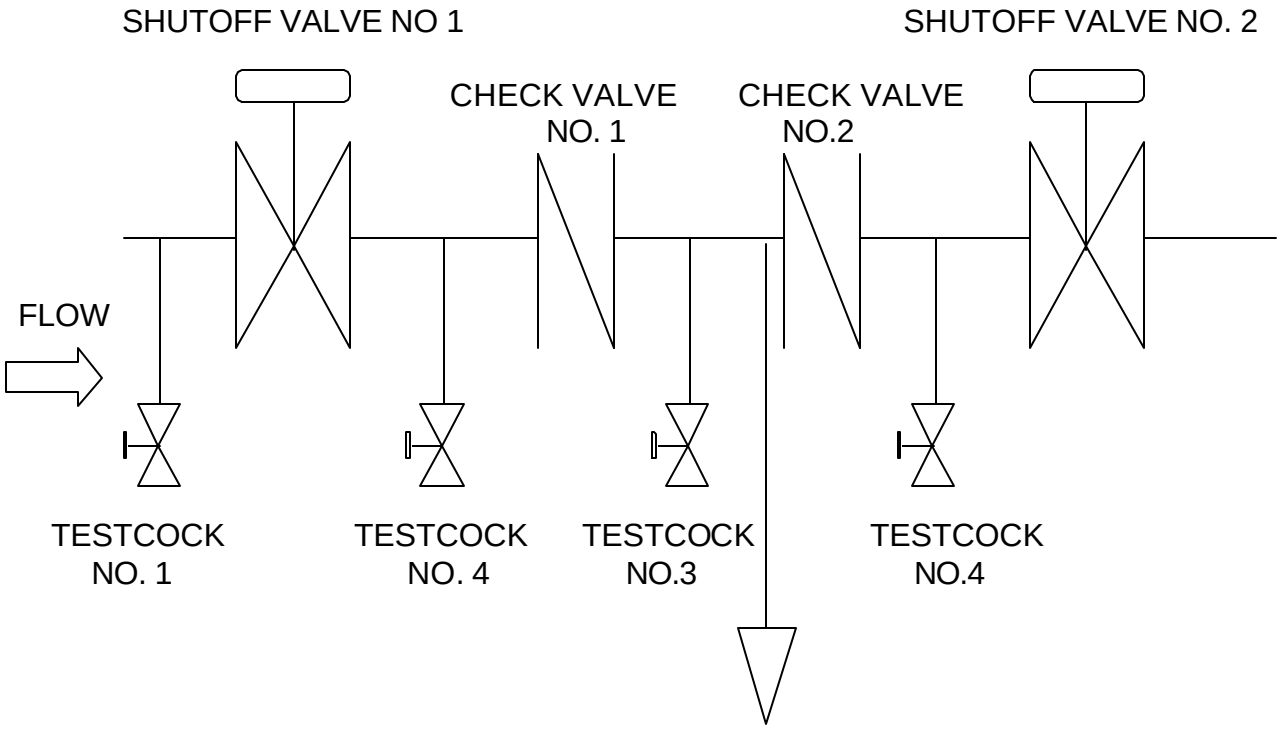
Reduced Pressure Principle Backflow Prevention Assembly (RP) is a backflow preventer incorporating not less than two check valves, an automatically operated differential relief valve located between the two check valves, a tightly closing shut-off valve on each side of the check valve assembly, and is equipped with the necessary test cocks for testing. (*CCR, Title 17, Section 7583 (j)*).

CONSTRUCTION AND INSTALLATION SPECIFICATIONS:

A required Reduced Pressure Principle Backflow Prevention Assembly shall, as a minimum conform to the AWWA Standard C506-78 (R83) adopted on January 28, 1978 for Reduced Pressure Type Backflow Prevention Devices. (*CCR, Title 17, Section 7602(c)*).

A Reduced Pressure Principle Backflow Prevention Assembly shall be located as close as practical to the user's connection and shall be installed a minimum of twelve inches (12") above grade and not more than thirty-six inches (36") above grade measured from the bottom of the device and with a minimum of twelve inches (12") side clearance. (*CCR, Title 17, Section 7603 (c)*). Figure No. 2 shows a RP schematic.

FIGURE NO. 2
REDUCED PRESSURE PRINCIPLE ASSEMBLY



DIFFERENTIAL PRESSURE RELIEF VALVE

A Reduced Pressure Principle Backflow Prevention Assembly is the minimum type of backflow protection required to protect the public water supply at the water user connection for the following situations.

- The public water system serves water users premises where there is an irrigation system that can inject fertilizers, herbicides, or pesticides.

- The public water system serves water users premises where there is an unapproved auxiliary water supply and there are no interconnections between the unapproved auxiliary water supply and the public water system.

- The public water system serves water user premises where there are pier hydrants that supply water to vessels for any purpose.

- The public water system serves water users premises where there are marine facilities.

- The public water system serves water users premises where entry to the premises is restricted so that inspections for cross-connections cannot be made with sufficient frequency or at sufficiently short notice to assure that cross-connection do not exist.

- The public water system serves water users premises where there is a history of cross-connections being established or re-established on the premises.

3. REDUCED PRESSURE PRINCIPLE ASSEMBLIES

COMPANY	MODEL	SIZE (INCHES)											
		1/2	3/4	1	1-¼	1- ½	2	2- ½	3	4	6	8	10
AMES	4000B	A	A	A	A	A	A						
	4000BM2			A									
	4000BM3		A										
	4000CIV							A	A	A	A	A	A
	4000SS							A	A	A	A		
	4000-RP									A	A	A	A
BUCKNER	24000		y										
	24001			y									
	24002				y								
	24003					y							
	24004						y						
	24000/25		y										
	24001/25			y									
	24002/25				y								
	24003/25					y							
	24004/25						y						
CLA - VAL	RP-2		A	A	A	A							
	RP-4						A	A	A	A	A	A	A
	RP4V [3]									A			
	RP6LW		A	A	A	A	A						
	RP6VW		A	A		A	A						
	RP7LW							A	A	A	A	A	A
	RP7LY							A	A	A	A	A	A
	RP8LW							A	A	A	A	A	
	RP8LY							A	A	A	A	A	
	RP8NW							y	y	y	y	y	y
	RP8NY							y	y	y	y	y	y
	RP8VW							Az	Az	Az	Az	Az	Az
	RP8VY							Az	Az	Az	Az	Az	Az

A signifies that these models are approved backflow prevention assembly for horizontal installations only.

[3] Model RP4V is approved for vertical installation with the flow of water vertically upward as shown in the Appendix.

Az signifies that these models are approved only for N and Z configurations, as shown in the Appendix.
y signifies that these models are no longer manufactured, only spare parts are available.

REDUCED PRESSURE PRINCIPLE ASSEMBLIES

	MODEL	SIZE (INCHES)												
		1/4	3/8	1/2	3/4	1	1-¼	1- ½	2	2- ½	3	4	6	8	10
	40-200-02										A				
	40-200-03										A				
	40-200-05										A				
	40-201-02	A													
	40-201-A2	A													
	40-201-A2S	A													
	40-201-99T	A													
	40-202-02		A												
	40-202-A2		A												
	40-202-A2S		A												
	40-202-99T		A												
	40-203-02			A											
	40-203-A2			A											
C	40-203-A2S			A											
O	40-203-99T			A											
N	40-204-02				A										
B	40-204-99T				A										
R	40-204-A2				A										
A	40-204-A2S				A										
C	40-204-A2U [4]				A										
O	40-204-A2Z [4]				A										
	40-204-TC2				A										
	40-204-TCU [4]				A										
	40-205-02					A									
	40-205-99T					A									
	40-205-A2					A									
	40-205-A2S					A									
	40-205-A2U [4]					A									
	40-205-A2Z [4]					A									
	40-205-TC2					A									

[4] The A2Z, A2U, and TCU series assemblies are approved in the orientation shown in the Appendix.

A signifies that these models are approved backflow prevention assembly for horizontal installations only.

REDUCED PRESSURE PRINCIPLE ASSEMBLIES														
		SIZE (INCHES)												
	MODEL	1/4	3/8	1/2	3/4	1	1-¼	1- ½	2	2- ½	3	4	6	8	10
	40-205-TCU [4]					A									
	40-206-02						A								
	40-206-A2						A								
	40-206-A2U [4]						A								
	40-206-A2Z [4]						A								
	40-206-99T						A								
	40-207-02							A							
C	40-207-A2							A							
O	40-207-A2U [4]							A							
N	40-207-A2Z [4]							A							
B	40-207-99T							A							
R	40-208-02								A						
A	40-208-A2								A						
C	40-208-A4								A						
O	40-208-A2U [4]								A						
	40-208-A2Z [4]								A						
	40-208-99T								A						
	40-209-02									A					
	40-209-03									A					
	40-209-05									A					
	40-20A-02											A			
	40-20A-03											A			
	40-20A-05											A			
	40-20C-02												A		
	40-20C-03												A		
	40-20C-05												A		
	40-20E-02													A	
	40-20E-03													A	
	40-20G-02														A
	40-20G-03														A

A signifies that these models are approved backflow prevention assembly for horizontal installations only.

[4] TheA2U and TCU series assemblies are approved in the orientation shown in the appendix shown in the Appendix.

REDUCED PRESSURE PRINCIPLE ASSEMBLIES															
COMPANY	**MODEL**	**SIZE (INCHES)**													
		1/4	**3/8**	**1/2**	**3/4**	**1**	**1-¼**	**1-½**	**2**	**2-½**	**3**	**4**	**6**	**8**	**10**
FEBCO	825									y	y	y	y	y	y
	835B				y	y		y	y						
	825D									y	y	y	y	y	y
	825Y				A	A	A	A	A						
	825YA [5]				A	A		A	A						
	825YAR [5]				A	A		A	A						
	825YD									A	A	A	A	A	A
	825YR				A	A		A	A						
	860			A	A	A	A	A	A	A	A	A	A	A	
	860U			A	A	A	A	A	A						
	880									A	A	A	A	A	A
	880V									Az	Az	Az	Az	Az	Az
FLOMATIC	RPZ				A	A		A	A	A	A	A			
	RPZE				A	A		A	A						
	RPZ-II			A	A										
	RPZ-IIE	A			A										
HERSEY / GRINNELL	6CM									A	A	A	A	A	A
	FRP-II				A	A	A	A	A						
	6CM-BRONZE									A	A	A	A		
WATTS	009									A	A	y	y		
	009M1QT						y	y	y						
	009M1PCQT						y	y	y						
	009M2QT				A	A	A	A	A						
	009M2PCQT					A	A	A	A						
	009M3QT				A										
	009PCQT			A	A	y	y	y	y						
	009QT	A	A	A	A	y	y	y	y						
	009SSM1QT								y						
	009SSM1PCQT								y						
	009SSPCQT				y	y	y	y	y						
	009SSQT				y	y	y	y	y						
	909									A	A	A	A	y	y
	909BB									A	A				
	909HWQT				A	A									
	909HWM1QT						A	A	A						

A Signifies that these models are approved backflow prevention assembly for horizontal installations only.

Az Signifies that these models are approved only for N and Z configurations, as shown in the Appendix.

y Signifies that these models are no longer manufactured, only spare parts are available.

[5] The models 825YA and 825YAR are approved in the configurations shown in the appendix.

REDUCED PRESSURE PRINCIPLE ASSEMBLIES												
COMPANY	**MODEL**	**SIZE (INCHES)**										
		1/2	**3/4**	**1**	**1-¼**	**1- ½**	**2**	**2- ½**	**3**	**4**	**6**	**8**	**10**
WATTS	909M1											**A**	**A**
	909M1QT				**A**	**A**	**A**						
	909M1QTFDA											**A**	**A**
	909PCHWM1QT				**A**	**A**	**A**						
	909PCHWQT		**A**	**A**									
	909PCM1QT				**A**	**A**	**A**						
	909PCQT		**Av**	**Av**									
	909QT		**Av**	**Av**									
	909QTFDA							**A**	**A**	**A**	**A**		
	990									**y**		**y**	
	990QT-FDA									**y**		**y**	
	992									**y**			**y**
	994							**A**	**A**	**A**	**A**		
	995QT	**A**	**A**	**A**									
	FAE909QT				**A**	**A**	**A**						
	FAE909HWQT				**A**	**A**	**A**						
	SS009M3QT		**A**										
	SS009QT			**A**									
	U009APCQT [6]		**A**	**y**									
	U009AQT [6]		**A**	**y**									
	U009M1APCQT [6]					**y**	**y**						
	U009M1AQT [6]					**y**	**y**						
	U009M1PCQT				**A**	**A**	**A**						
	U009M1QT				**A**	**y**	**y**						
	U009M2APCQT [6]			**A**		**A**	**A**						
	U009M2AQT [6]			**A**		**A**	**A**						
	U009M2PCQT			**A**		**A**	**A**						
	U009M2QT		**A**	**A**		**A**	**A**						
	U009PCQT	**A**	**A**	**y**	**y**	**y**	**y**						
	U009QT	**A**	**y**	**y**	**y**	**y**	**y**						

A signifies that these models are approved backflow prevention assembly for horizontal installations only.
Av signifies that these models are approved for both, horizontal and vertical up installations.
y signifies that these models are no longer manufactured, only spare parts are available.

[6] The models U009APCQT, U009AQT, U009M1APCQT, U009M1AQT, U009M2APCQT, and U009M2AQT are approved in the configurations shown in the Appendix.

REDUCED PRESSURE PRINCIPLE ASSEMBLIES															
COMPANY	**MODEL**	**SIZE (INCHES)**													
		1/4	**3/8**	**1/2**	**3/4**	**1**	**1-¼**	**1- ½**	**2**	**2- ½**	**3**	**4**	**6**	**8**	**10**
WATTS	U009SSPCQT				**y**	**y**	**y**	**y**	**y**						
	U009SSQT				**y**	**y**	**y**	**y**	**y**						
	U909QT				**Av**	**Av**									
	U909HWQT				**A**	**A**									
WILKINS	375									**A**	**A**	**A**	**A**		
	375G											**A**	**A**		
	375GPI											**A**	**A**		
	375PI											**A**	**A**		
	475											**vA**	**vA**		
	475G											**vA**	**vA**		
	475V											**vAv**	**vAv**		
	475VG											**vAv**	**vAv**		
	575				**y**	**y**	**y**	**y**	**y**	**y**	**y**	**y**	**y**		
	575A				**y**	**y**									
	975				**A**	**A**	**A**	**A**	**A**	**A**	**A**	**A**	**A**	**A**	**A**
	975A				**A**	**A**	**A**	**A**	**A**						
	975BMS									**A**	**A**	**A**	**A**	**A**	**A**
	975G											**A**	**A**		
	975MS									**A**	**A**	**A**	**A**	**A**	**A**
	975XL	**A**	**A**	**A**	**A**	**A**	**A**	**A**	**A**						
	975XLBMS				**A**	**A**	**A**	**A**	**A**						
	975XLMS				**A**	**A**	**A**	**A**	**A**						
	975XLU				**A**	**A**		**A**	**A**						
	975XLSE[7]				**A**	**A**	**A**	**A**	**A**						
	975XLSEU[7]				**A**	**A**	**A**	**A**	**A**						
	975XLV[7]				**A**	**A**									
	575-M8	**y [4 x 4 x 8]**													
	575-M10	**y [6 x 6 x 10]**													

A signifies that these models are approved backflow prevention assembly for horizontal installations only.
Av signifies that these models are approved for both, horizontal and vertical up installations.
vA signifies that these models are approved only for vertical up inlet/vertical down outlet configurations.
vAv signifies that these models are approved only for vertical up inlet/vertical up outlet configurations.
y signifies that these models are no longer manufactured, only spare parts are available.

[7] The models 975XLSE, 975XLSEU, and 975XLV are approved in the orientation shown in the Appendix.

4. REDUCED PRESSURE PRINCIPLE DETECTOR ASSEMBLIES[8]

COMPANY	MODEL	SIZE (INCHES)											
		1/2	3/4	1	1-¼	1- ½	2	2- ½	3	4	6	8	10
AMES	5000									**A**	**A**	**A**	**A**
	5000CIV							**A**	**A**	**A**	**A**	**A**	**A**
CLA - VAL	18-4												**A**
	RD7LY							**A**	**A**	**A**	**A**	**A**	**A**
CONBRACO	40-700-C3								**A**				
	40-700-E3								**A**				
	40-70A-C3									**A**			
	40-70A-E3									**A**			
	40-70C-C3										**A**		
	40-70C-E3										**A**		
	40-70E-C3											**A**	
	40-70E-E3											**A**	
	40-70G-C3												**A**
	40-70G-E3												**A**
FEBCO	826YD							**A**	**A**	**A**	**A**	**A**	**A**
HERSEY / GRINNELL	6CMDA									**A**	**A**	**A**	**A**
WATTS	009NRS RPDA									**y**	**y**		
	009OSY RPDA									**y**	**y**		
	909 RPDA							**A**	**A**	**A**	**A**	**A**	**A**
	990 RPDA									**y**		**y**	
	992 RPDA									**y**			**y**
WILKINS	375 DA									**A**	**A**		
	375 DAG									**A**	**A**		
	375 DAGPI									**A**			
	375 DAPI									**A**			
	475 DA									**vA**	**vA**		
	475 DAG									**vA**	**vA**		

A signifies that these models are approved backflow prevention assembly for horizontal installations only.
vA signifies that these models are approved only for vertical up inlet/vertical down outlet configurations.
y signifies that these models are no longer manufactured, only spare parts are available.

[8] A RPP detector assembly is an approved backflow prevention assembly that is configured the same as the RPP assembly, except a RPP detector is equipped with a bypass-detector that allows the visual inspection of flow through the assemblies.

REDUCED PRESSURE PRINCIPLE DETECTOR ASSEMBLIES												
COMPANY	MODEL	SIZE (INCHES)										
		1/2	3/4	1	1-¼	1- ½	2	2- ½	3	4	6	8	10
WILKINS	475 DAV									vAv			
	475 DAVG									vAv			
	975 DA							A	A	A	A	A	A
	975 DAG									A	A		

A signifies that these models are approved backflow prevention assembly for horizontal installations only.
vA signifies that these models are approved only for vertical up inlet/vertical down outlet configurations.
vAv signifies that these models are approved only for vertical up inlet/vertical up outlet configurations.
y signifies that these models are no longer manufactured, only spare parts are available.

APPENDIX

DEFINITIONS:

"AIR-GAP" is a physical break between the supply line and a receiving vessel.

"AWWA STANDARD" is an official standard developed and approved by the American Water Works Association (AWWA).

"BACKFLOW" means a flow condition, caused by a differential in pressure that causes the flow of unapproved water or other contaminants into the potable supply source.

"BACKSIPHONAGE" is backflow caused by negative or reduced pressure in the supply piping.

"BACKPRESSURE" is backflow caused by positive or higher pressure in the users system.

"BACKFLOW PREVENTION ASSEMBLY" means an assembly that has passed laboratory and field evaluation tests performed by a recognized testing organization, which has demonstrated their competency to perform such tests to the Department of Health Services.

"CROSS-CONNECTION" is an unprotected actual or potential connection between a potable water system used to supply water for drinking purposes and any source or system containing unapproved water or a substance that is not or cannot be approved as safe and potable.

"DOUBLE CHECK VALVE ASSEMBLY" is an assembly of at least two independently acting check valves including tightly closing shut-off valves on each side of the check valve assembly and test cocks available for testing the watertightness of each check valve.

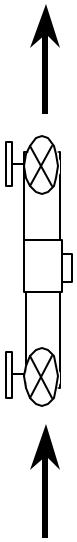
"HEALTH AGENCY" means the California Department of Health Services, or the local health officer with respect to a small water system.

"USER CONNECTION" is the point of connection of a user's piping to the water supplier's facilities.

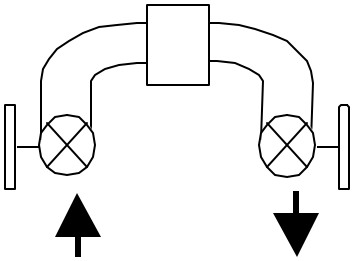
"REDUCED PRESSURE PRINCIPLE" is a backflow device incorporating not less than two check valves, an automatically operated differential relief valve located between the two check valves, a tightly closing shut-off valve on each side of the check valve assembly, and equipped with necessary test cocks for testing.

APPROVED CONFIGURATIONS

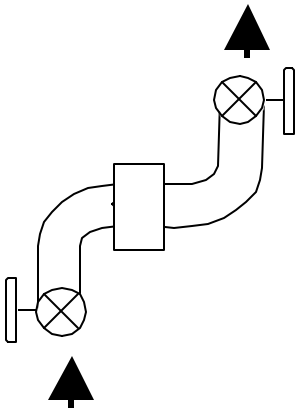
VERTICAL UP CONFIGURATIONS



"N AND Z " CONFIGURATIONS



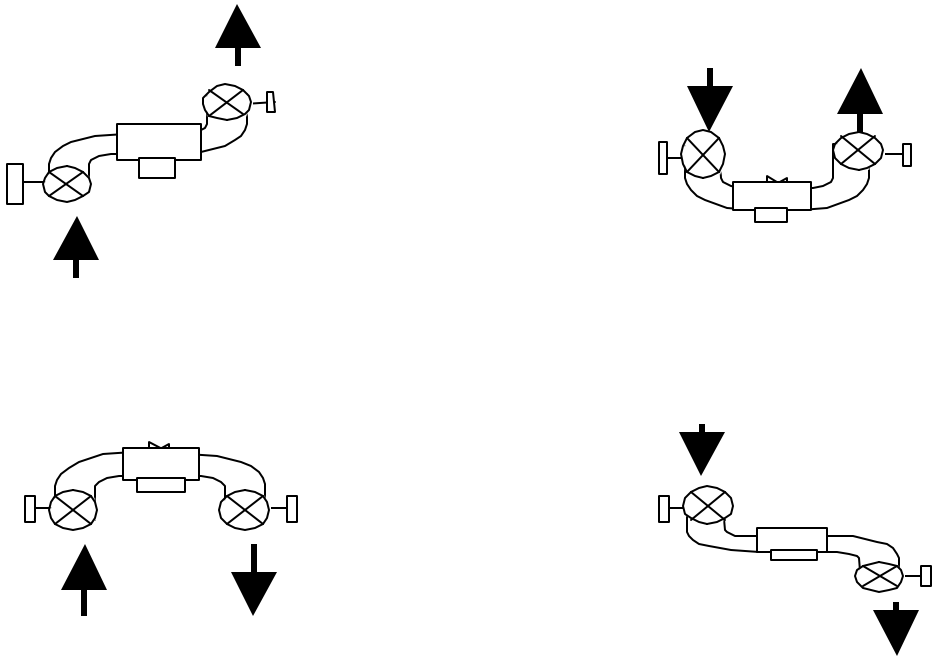
N CONFIGURATION



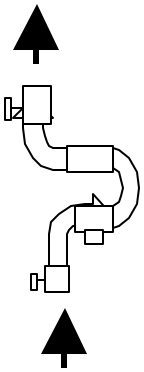
Z CONFIGURATION

APPROVED CONFIGURATIONS

WATTS MODELS (Footnote 1)



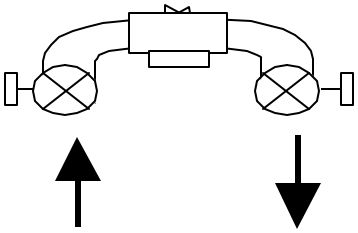
CLA-VAL MODEL RP4V (Footnote 3)



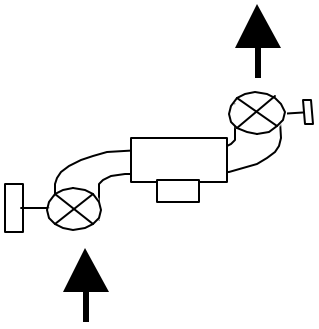
APPROVED CONFIGURATIONS

CONBRACO (Footnote 4)

A2U and TCU Series

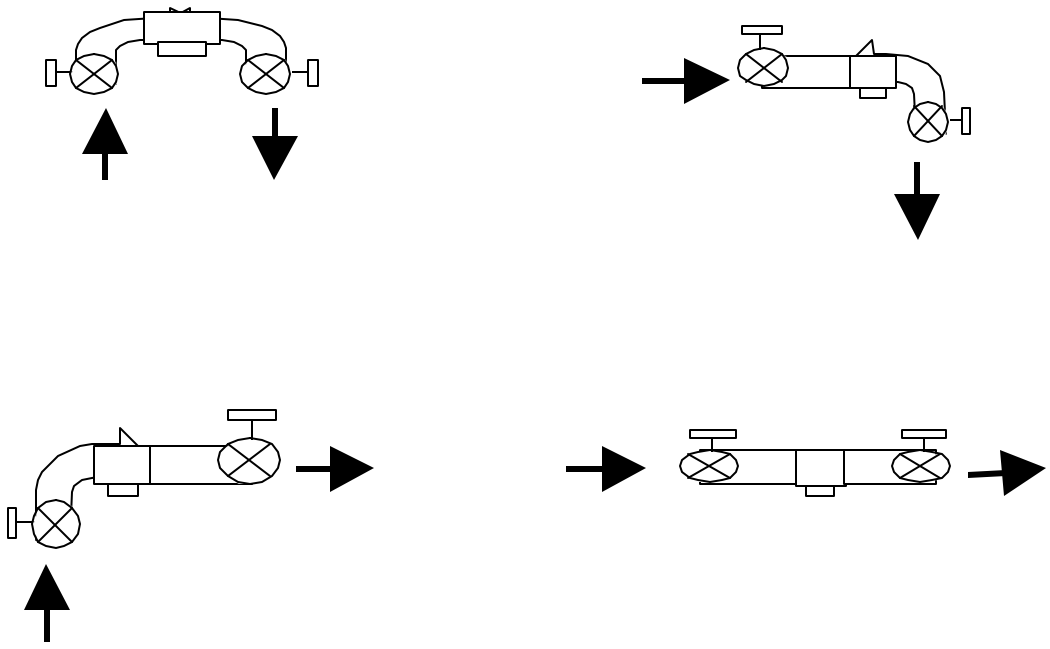


A2Z Series



APPROVED CONFIGURATIONS

FEBCO MODELS 825YA AND 825YAR (Footnote 5)



WILKINS MODEL 975 XLV, 975XLSE, 975XLSEU (Footnote 7)